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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/828,519	04/06/2001	Andrew W. Lo	1869-003A	6245

9629   7590   09/26/2003

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EXAMINER
FELTEN, DANIEL S

ART UNIT	PAPER NUMBER
3624	

DATE MAILED: 09/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.	Applicant(s)
		09/828,519	Lo
		Examiner	Art Unit
		Felten	3624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _____3_____ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on __6/24/2003__ .

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) __1-14__ is/are pending in the application.

    4a) Of the above, claim(s) __11-14__ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) __1-5__ is/are rejected.

7) ☐ Claim(s) __6-10__ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some* c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    *See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____

4) ☐ Interview Summary (PTO-413) Paper No(s). _____

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other:

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DETAILED ACTION

1.   The Notice of Election of Group I: claims 1-10, is acknowledged. Group II: claims 11-

14, is hereby withdrawn from consideration.

Response to Arguments

2.   Applicant's arguments with respect to claims 1-10 have been considered but are moot in

view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art
> are such that the subject matter as a whole would have been obvious at the time the invention was made to a
> person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be
> negatived by the manner in which the invention was made.

4.   Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Black in

view of Black et al (hereinafter "Black", US 6,012.042) in view of Negishi (US 5,444, 819).

Re claim 1:

Black discloses a system for processing price data corresponding to a sequence of time for a

selected interval, the system comprising:

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1   a database means (*12--Technical data storage device*, or *16--fundamental data storage*

2   *device*) for storing said price data in system addressable format, wherein said price data is

3   organized for processing into non-linear relationship (see Black, fig. 1, col. 4, ll. 20+);

4   a data processor (*10--Data Conversion Apparatus*) responsive to price data stored in

5   the database and capable of generating the non-linear relationship (see Black, fig. 1, col. 4, ll.

6   45+);

7   Black also discloses that a user is able to choose from a variety of technical and

8   fundamental analysis techniques and technologies (see Black, col. 10, ll. 57-67). However,

9   Black fails to disclose a pattern recognition processor for applying the smoothed non-

10 linear relationship to discern the existence of one or more patterns of price-time data; and

11 generating a results output based on a recognition of the pattern. Negishi discloses a

12 pattern recognition processor to discern patterns of price-time data and generates an output

13 based upon the recognition of the pattern (see Negishi, Abstract; col. 16, ll. 8-41). Because

14 Black recognizes that technical analysis includes the examination of price data, and other

15 related information, to process and predict trends associated with various markets (see Black,

16 col. 30+; and col. 2, ll. 48+), it would have been obvious for an artisan at the time of the

17 invention of Black to integrate/substitute the pattern recognition processor, because an artisan

18 at the time of the invention would have sought to use a pattern recognition processor to

19 conveniently and automatically analyze market trends and make market decisions as shown in

20 figure 3 (see Black, fig. 3, col. 9, ll. 64 to col. 10, ll. 33). Both the stock price chart and CCI

21 (of Black) and the TOPIX (of Negishi) both have market trends and therefore are considered

22 art recognized equivalents whereby the use of a recognition processor would present no

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1 unexpected results (to analyze market trends and make market predictions) to one of ordinary

2 skill in the art.

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4

5 **Re claim 2:**

6 wherein real-time price data is inputted from commercial financial data vendors (see Black,

7 col. 1, ll. 46-65).

8

9 **Re claim 3:**

10 wherein the database includes means for storing price data taken form end of day trading

11 records (see Black, col. 1, ll. 46-65).

12

13 **Re claim 4:**

14 wherein data means includes means for storing trading volume and trade size data (see Black,

15 col. 1, ll. 46-65).

16

17 **Re claim 5:**

18 comprising means for testing prediction characteristics, via convergence criteria and adjusting

19 system parameters in response to the criteria (see Black, col. 1, ll. 46-65).

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Allowable Subject Matter

5.   Claims 6-10 are objected to as being dependent upon a rejected base claim, but would be allowable if incorporated as limitations within the body of independent claim 1.

Conclusion

6.   A list of relevant prior art appears below not relied upon in this Office Action:

US Patents:

Pilipovic (US 6,456,982) discloses a computer system for generating projected

Kil et al (US 5,682,465) discloses learning method of non-linear network function approximate

7.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Daniel S. Felten* whose telephone number is (703) 305-0724. The examiner can normally be reached between the hours of 7:00AM to 5:30PM Monday-Thursday. Any inquiry of a general nature relating to the status of this application or its proceedings should be directed to the Customer Service Office (703) 306-5631, or the examiner's supervisor *Vincent Millin* whose telephone number is (703) 308-1065.

8.   Response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

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1   for formal communications intended for entry, or (703) 305-0040, for informal or draft

2   communications, please label "Proposed" or "Draft".

3   Communications via Internet e-mail regarding this application, other than those under 35

4   U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be

5   addressed to *[daniel.felten@uspto.gov]*.

6   All Internet e-mail communications will be made of record in the application file. PTO

7   employees do not engage in Internet communications where there exists a possibility that

8   sensitive information could be identified or exchanged unless the record includes a properly

9

10   signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly

11   set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and

12   Trademark on February 25, 1997 at 1 195 OG 89.

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16   DSF

17   **September 11, 2003**

**VINCENT MILLIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600**